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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,453	10/16/2003	David B. Chung	2207/16635	5418
23838	7590	03/30/2006	EXAMINER	
KENYON & KENYON LLP 1500 K STREET N.W. SUITE 700 WASHINGTON, DC 20005			NGUYEN, HOAN C	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 03/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/685,453

Applicant(s)

CHUNG, DAVID B.

Examiner

HOAN C. NGUYEN

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-14 and 21-25 is/are pending in the application.
- 4a) Of the above claim(s) 21-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-14 and 24-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Applicant's arguments with respect to claims 7-8, 10-11, 13-14 and 24-25 based on the Response filed on 1/13/2006 have been considered but are the same ground(s) of rejection. Therefore, this is Final action.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: The response to Objection is still unclear how a polymer memory system 400 fitting in the display structure:

- How is a polymer memory system 400 of Figure 4 place in chamber 130 of Figure 1? Figure 1 shows a chamber including one layer of a polymer memory system without dielectric layer.
- In Figure 4, where does a liquid crystal material go in Figure 4? Where do substrates go? where supply/return conductor, addressing conductor go? In another word, please provide Figure 4 further including substrates, supply/return conductor, addressing conductor, and liquid crystal material.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate

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prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 7-8, 10-11, 13-14 and 24-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Chung et al. (US 20040125272A1).

Chung et al. teach (Figs. 1, 4-7) a display comprising:

Claim 7:

- a chamber to store liquid crystal material,
- a plurality of display transistors 120/320 arranged in an array across a planar surface of the chamber, the display transistors 430 to define pixels of the display,

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- a memory system 140/420 having a plurality polymer memory cells provided within the chamber (between substrate 410 and protection layer 460) to store liquid crystal 450, each memory cell being electrical readable and writable as Fig. 7 shown.

Claim 13:

- a reflector (mirror layer 440) coupled to one surface of the display.

Claim 14:

- liquid crystal material provided within the chamber,
- a first control line (data or gate lines inherently) on a first surface of the chamber coupled to a display transistor of the plurality of display transistor
- a second control line (common electrode inherently) provided on a second surface opposite the first surface.

wherein

Claim 8:

- the chamber includes viewable region 740 and non-viewable region 750 and the memory cells are co-located with a non-viewable region 750 thereof as Fig. 7 shown.

Claim 9:

- polymer memory cells are co-located with the display transistors since transistor layer 430 and the polymer memory system may be integrated into a single layer (paragraph 19).

Claims 10 and 24:

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- the polymer memory system comprises: a plurality of memory cells 610, a driving line (wording lines 620) coupled to each of the cells, and a plurality of data lines (bitlines 630), one coupled to each of the cells.

Claims 11 and 25:

- the polymer memory system comprises a plurality of layers 1 and 2, each layer comprising: a plurality of memory cells 610, a driving line (wording lines 620) coupled to each of the cells in the respective layer, and a plurality of data lines (bitlines 630), one coupled to each of the cells in the respective layer.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chung et al. (US 20040125272A1).

In Fig. 4, Chung et al. disclose the reflective-type LCD with mirror layers 440, thus Chung et al. does not explicitly disclose a backlight coupled to one surface of the display.

Chung et al. disclose (Fig. 5) the transmissive-type LCD with a backlight coupled to one surface of the display. Therefore, it is obvious to replace mirror layer 440 into the

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transparent layers and a backlight coupled to one surface of the display, the LCD changes into transmissive-type LCD.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify a display device as Chung et al. disclosed with the transparent layers replaced the mirror layers and a backlight coupled to one surface of the display for providing transmissive-type LCD.

Response to Arguments

Applicant's arguments filed on 1/13/2006 have been fully considered but they are not persuasive.

Applicant's ONLY arguments are follows:

Chung does not disclose providing the polymer memory cells within the chamber to store liquid crystal.

Examiner's responses to Applicants' ONLY arguments are follows:

Chung disclose in Figure 4 that the substrate 410 and protective layer 400 creates a chamber in between. The polymer memory cells provide within chamber, which is between the substrate 410 and protective layer 400. The chamber also stores the liquid crystal layer 450. Figure 6 with to layers place in polymer memory system 420 in Figure 4.

However, Figure 4 of the instant application also do not clear show how two layers replace the polymer memory system in Figure 1 of the instant application.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **HOAN C. NGUYEN** whose telephone number is (571) 272-2296. The examiner can normally be reached on **MONDAY-THURSDAY:8:00AM-4:30PM**.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Kim H. Robert** can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HOAN C. NGUYEN
Examiner
Art Unit 2871

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ANDREW SCHECHTER
PRIMARY EXAMINER